

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
Trade name : Black PU Sealant & Adhesive

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Professional use

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

JRP DISTRIBUTION LTD Ltd  
12 PETER ROAD  
GB- BN15 8TH LANCING  
Great Britain  
T +01903750355

#### 1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Respiratory sensitisation, Category 1 H334  
Warning! Hazardous respirable dust may be formed when used. Do not breathe dust. EUH212

Full text of H- and EUH-statements: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS08

CLP Signal word :

Danger

Contains :

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate, 4,4'-methylenediphenyl diisocyanate

Hazard statements (CLP) :

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements (CLP) :

P261 - Avoid breathing vapours.

P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

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EUH-statements : EUH212 - Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.  
Extra phrases : As from 24 August 2023 adequate training is required before industrial or professional use.

### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  
Mixture does not contain substance (s) classified as PBT or vPvB in concentrations above 0,1%.  
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII  
Contains no PBT/vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Reaction mass of ethylbenzene and xylene	EC-No.: 905-588-0 REACH-no: 01-2119488216-32	$\geq 2.5 - < 10$	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Acute Tox. 4 (Inhalation:vapour), H332 (ATE=6.35 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304
Titanium dioxide (Note W)(Note 10)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 EC Index-No.: 022-006-00-2 REACH-no: 01-2119489379-17	< 5	Carc. 2, H351
Hydrocarbons, C11-C14, n-alkanes, iso-alkanes, cyclic, <2% aromatic substance with a Community workplace exposure limit	EC-No.: 926-141-6 REACH-no: 01-2119456620-43	$\geq 1 - < 10$	Asp. Tox. 1, H304 EUH066
calcium oxide substance with a Community workplace exposure limit	CAS-No.: 1305-78-8 EC-No.: 215-138-9 REACH-no: 01-2119475325-36	< 2.5	Skin Corr. 1C, H314 Eye Dam. 1, H318 EUH071
4,4'-methylenediphenyl diisocyanate substance with a Community workplace exposure limit (Note C)(Note 2)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	0,1 - <1	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 (ATE=0.49 mg/l/4h) STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
chromium oxide substance with a Community workplace exposure limit	CAS-No.: 1308-38-9 EC-No.: 215-160-9 REACH-no: 01-2119433951-39	< 2,5	Not classified

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	CAS-No.: 1065336-91-5 EC-No.: 915-687-0 REACH-no: 01-2119491304-40	< 0,1	Skin Sens. 1A, H317 Repr. 2, H361f Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
calcium oxide	CAS-No.: 1305-78-8 EC-No.: 215-138-9 REACH-no: 01-2119475325-36	( 1 ≤C < 3) Eye Irrit. 2, H319 ( 3 ≤C ≤ 100) Eye Dam. 1, H318 ( 5 ≤C < 100) STOT SE 3, H335 ( 10 ≤C ≤ 50) Skin Irrit. 2, H315 ( 50 ≤C ≤ 100) EUH071 ( 50 ≤C ≤ 100) Skin Corr. 1C, H314
4,4'-methylenediphenyl diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	( 0.1 ≤C < 100) Resp. Sens. 1, H334 ( 5 ≤C < 100) STOT SE 3, H335 ( 5 ≤C < 100) Skin Irrit. 2, H315 ( 5 ≤C < 100) Eye Irrit. 2, H319

Note 10 : The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter ≤ 10 µm.

Note 2 : The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note W : It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

Full text of H- and EUH-statements: see section 16

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation	: Move to fresh air. In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after skin contact	: After contact with skin, wash immediately and thoroughly with water and soap. Take off contaminated clothing and wash it before reuse. If symptoms persist call a doctor.
First-aid measures after eye contact	: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	: Rinse mouth. Get medical advice/attention if you feel unwell.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: May cause sensitization by inhalation. Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
Symptoms/effects after skin contact	: Causes mild skin irritation. irritation (itching, redness, blistering). Dry skin. Swelling of the skin.
Symptoms/effects after eye contact	: Not expected to present a significant eye contact hazard under anticipated conditions of normal use.
Symptoms/effects after ingestion	: Swallowing of this material presents health hazard. Ingestion may cause nausea, vomiting and diarrhea. Abdominal pain.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Carbon dioxide. extinguishing powder.

#### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide. Isocyanates. Hydrogen cyanide. Nitrogen oxides.

#### 5.3. Advice for firefighters

Protection during firefighting : Wear self-contained breathing apparatus and protective suit (see section 8).

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Ensure adequate ventilation, especially in confined areas.

##### 6.1.1. For non-emergency personnel

No additional information available

##### 6.1.2. For emergency responders

No additional information available

#### 6.2. Environmental precautions

Do not allow to enter drains or water courses.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Keep in suitable, closed containers for disposal. This material and its container must be disposed of in a safe way, and as per local legislation.

#### 6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection".

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Do not breathe vapour or spray.  
Precautions for safe handling : Obtain special instructions before use. Wear protective clothing.

#### 7.2. Conditions for safe storage, including any incompatibilities

No additional information available

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 8.1.1 National occupational exposure and biological limit values

calcium oxide (1305-78-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Calcium oxide

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calcium oxide (1305-78-8)	
IOEL TWA	4 mg/m <sup>3</sup>
IOEL STEL	1 mg/m <sup>3</sup>
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	2 mg/m <sup>3</sup>
Titanium dioxide (13463-67-7)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> inhalable dust 4 mg/m <sup>3</sup> respirable dust
Hydrocarbons, C11-C14, n-alkanes, iso-alkanes, cyclic, <2% aromatic	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL STEL	1200 mg/m <sup>3</sup>
4,4'-methylenediphenyl diisocyanate (101-68-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	0.052 mg/m <sup>3</sup>
IOEL TWA [ppm]	0.005 ppm
chromium oxide (1308-38-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	2 mg/m <sup>3</sup>

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station. Local exhaust or breathing protection.

### 8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



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### 8.2.2.1. Eye and face protection

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses		With side shields	EN 166

### 8.2.2.2. Skin protection

#### Skin and body protection:

Protective clothing

#### Hand protection:

Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Polyvinylalcohol (PVA)				EN ISO 374

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Respiratory protection			
Device	Filter type	Condition	Standard
Gas filters	Type A - High-boiling (>65 °C) organic compounds, Type P1, Type P2, Type P3	If conc. in air > exposure limit	EN 140, EN 136

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Consumer exposure controls:

Avoid contact with skin and eyes.

#### Other information:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste.
Colour	: According to product specification.
Odour	: Slight.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not determined
Freezing point	: No data available
Boiling point	: 137 °C
Flash point	: ≥ 70 °C ISO 3679
Auto-ignition temperature	: ≥ 200 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.16 at 20 °C

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Solubility	: Insoluble. Water: Insoluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.6 – 8 vol %

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable.

### 10.3. Possibility of hazardous reactions

No polymerization.

### 10.4. Conditions to avoid

None under normal use.

### 10.5. Incompatible materials

alcohols. Amines. Strong acids. alkali metals. Water. Alkaline earth metals.

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

Titanium dioxide (13463-67-7)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rat	> 10000 mg/kg
LD50 dermal rabbit	> 10000 mg/kg
LC50 Inhalation - Rat	> 6.82 mg/l
LC50 Inhalation - Rat (Dust/Mist)	> 6.82 mg/l/4h

### Hydrocarbons, C11-C14, n-alkanes, iso-alkanes, cyclic, <2% aromatic

LD50 oral rat	> 5000 mg/kg (OECD 401 method)
LD50 dermal rabbit	> 5000 mg/kg (OECD 402 method)
LC50 Inhalation - Rat	> 5000 mg/m <sup>3</sup> (OECD 403 method)

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<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
LD50 oral rat	3230 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), 95% CL: 2615 - 4247
LD50 dermal rat	> 3170 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
<b>4,4'-methylenediphenyl diisocyanate (101-68-8)</b>	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg
LC50 Inhalation - Rat	0.49 mg/l/4h
<b>Reaction mass of ethylbenzene and xylene</b>	
LD50 oral rat	3523 – 4000 mg/kg
LD50 dermal rabbit	12126 mg/kg
LC50 Inhalation - Rat	6.35 mg/l/4h
<b>chromium oxide (1308-38-9)</b>	
LD50 oral rat	> 5000 mg/kg (OECD 401 method)
LC50 Inhalation - Rat (Dust/Mist)	> 5.41 mg/l/4h (OECD 403 method)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met)
<b>Titanium dioxide (13463-67-7)</b>	
pH	7
<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
pH	8.43 Concentration: 1 other:% g/v
Serious eye damage/irritation	: Not irritating to rabbits on ocular application (Based on available data, the classification criteria are not met)
Additional information	: (OECD 405 method)
<b>Titanium dioxide (13463-67-7)</b>	
pH	7
<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
pH	8.43 Concentration: 1 other:% g/v
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
<b>4,4'-methylenediphenyl diisocyanate (101-68-8)</b>	
STOT-single exposure	May cause respiratory irritation.
<b>Reaction mass of ethylbenzene and xylene</b>	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)



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<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
NOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents), Guideline: EU Method B.7 (Repeated Dose (28 Days) Toxicity (Oral))
<b>4,4'-methylenediphenyl diisocyanate (101-68-8)</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>Reaction mass of ethylbenzene and xylene</b>	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
<b>chromium oxide (1308-38-9)</b>	
LOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight/day (OECD 408 method)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)
<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
Viscosity, kinematic	478 mm <sup>2</sup> /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm <sup>2</sup> /s)'
<b>Reaction mass of ethylbenzene and xylene</b>	
Viscosity, kinematic	0.74 mm <sup>2</sup> /s at 20 °C

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water	: No information available.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

<b>Titanium dioxide (13463-67-7)</b>	
LC50 - Fish [1]	155 mg/l Test organisms (species): other:Japanese Medaka
LC50 - Fish [2]	> 10000 mg/l
EC50 - Crustacea [1]	19.3 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	27.8 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	> 1000 mg/l
EC50 - Other aquatic organisms [2]	61 mg/l
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 100 mg/l pseudokirchneriella subcapitata
NOEC (chronic)	≥ 2.92 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic algae	5600 mg/l
<b>Hydrocarbons, C11-C14, n-alkanes, iso-alkanes, cyclic, &lt;2% aromatic</b>	
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202 method)
<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
LC50 - Fish [1]	0.9 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)

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<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
EC50 72h - Algae [1]	1.68 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	0.42 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
<b>4,4'-methylenediphenyl diisocyanate (101-68-8)</b>	
LC50 - Fish [1]	≥ 1000 mg/l
EC50 - Crustacea [1]	≥ 1000 mg/l
NOEC (chronic)	≥ 10 mg/l Daphnia magna (Big water flea)
<b>Reaction mass of ethylbenzene and xylene</b>	
NOEC chronic fish	1.3 mg/l
NOEC chronic crustacea	0.96 mg/l
NOEC chronic algae	0.44 mg/l
<b>chromium oxide (1308-38-9)</b>	
LC50 - Fish [1]	> 10000 mg/l (OECD 210 method)
NOEC chronic fish	1000 mg/l (OECD 210 method)
<b>12.2. Persistence and degradability</b>	
<b>Titanium dioxide (13463-67-7)</b>	
Persistence and degradability	Not readily biodegradable.
<b>Hydrocarbons, C11-C14, n-alkanes, iso-alkanes, cyclic, &lt;2% aromatic</b>	
Biodegradation	69 % (OECD 301F method)
<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
Biodegradation	(OECD 301F method)
<b>4,4'-methylenediphenyl diisocyanate (101-68-8)</b>	
Persistence and degradability	Not easily bio-degradable (according to OECD-criteria).
Biodegradation	28d 0 %
<b>Reaction mass of ethylbenzene and xylene</b>	
Persistence and degradability	Readily biodegradable.
<b>12.3. Bioaccumulative potential</b>	
<b>Titanium dioxide (13463-67-7)</b>	
BCF - Fish [1]	352
<b>Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate (1065336-91-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.37 – 2.77 (OECD 107 method)
<b>4,4'-methylenediphenyl diisocyanate (101-68-8)</b>	
Bioconcentration factor (BCF REACH)	200

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4,4'-methylenediphenyl diisocyanate (101-68-8)	
Partition coefficient n-octanol/water (Log Pow)	4.51
Bioaccumulative potential	highly bioaccumulative.

Reaction mass of ethylbenzene and xylene	
Partition coefficient n-octanol/water (Log Kow)	3.16 at 20 °C
Bioaccumulative potential	Bioaccumulation unlikely.

### 12.4. Mobility in soil

Reaction mass of ethylbenzene and xylene	
Surface tension	28.7 mN/m at 25 °C
Ecology - soil	Floats on water.

### 12.5. Results of PBT and vPvB assessment

Black PU Sealant & Adhesive	
This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII	
Mixture does not contain substance (s) classified as PBT or vPvB in concentrations above 0,1%.	
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII	

### 12.6. Other adverse effects

Additional information : Do not allow into drains or water courses

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods	: This material and its container must be disposed of as hazardous waste.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Dispose of at a licensed waste collection centre. Hand over to officially registered waste disposal company.
European List of Waste (LoW) code	: 08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances
HP Code	: HP3 - "Flammable:" – flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C; – flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air; – flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction; – flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa; – water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities; – other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste. HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence

## SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

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ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

##### REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	Reaction mass of ethylbenzene and xylene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Hydrocarbons, C11-C14, n-alkanes, iso-alkanes, cyclic, <2% aromatic ; Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate ; Reaction mass of ethylbenzene and xylene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl sebacate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Reaction mass of ethylbenzene and xylene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.
56.	4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI)
56(a)	4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 4,4'-Methylenediphenyl diisocyanate

### REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

### REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

### PIC Regulation (Prior Informed Consent)

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

### POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

### Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

### Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

A chemical safety assessment has been carried out

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For the following substances of this mixture a chemical safety assessment has been carried out:

4,4'-methylenediphenyl diisocyanate

### SECTION 16: Other information

Abbreviations and acronyms:	
CAS-No.	Chemical Abstract Service number
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand (BOD)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
SDS	Safety Data Sheet
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative

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Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. Supplier's safety documents. For more information regarding the use of this product, please refer to our technical information or contact the sales department in your region. ECHA (European Chemicals Agency).
Training advice	: Normal use of this product shall imply use in accordance with the instructions on the packaging.

### Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.
EUH212	Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C

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### Full text of H- and EUH-statements:

Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

### Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Resp. Sens. 1	H334	Calculation method
EUH212	EUH212	On basis of test data

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.